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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|--|-------------|----------------------|----------------------|------------------|
| 10/817,131 | 04/02/2004 | Angela T. Hui | H0346 / AMDP879US | 1493 |
| 23623 | 7590 | 11/30/2005 | EXAMINER | |
| AMIN & TUROCY, LLP 1900 EAST 9TH STREET, NATIONAL CITY CENTER 24TH FLOOR, CLEVELAND, OH 44114 | | | LUND, JEFFRIE ROBERT | |
| | | | ART UNIT | PAPER NUMBER |
| | | | 1763 | |

DATE MAILED: 11/30/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/817,131

Applicant(s)

HUI, ANGELA T.

Examiner

Jeffrie R. Lund

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 October 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-37 is/are pending in the application.
- 4a) Of the above claim(s) 21-37 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 02 April 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

1. Applicant's election of Group I, claims 1-20, in the reply filed on October 17, 2005 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)).

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1-16, and 20 rejected under 35 U.S.C. 102(b) as being anticipated by Carducci et al, US Patnet Application Publication 2003/0037880 A1.

Carducci et al teaches a plasma processing apparatus that includes: a gas distribution system 350, 103, 105 for supplying CF₄ to the processing chamber 112; an excitation system including an electrode 105 or RF coil 3105, 3115, 3202, connected to a voltage source 150, 3110, 3204 to form a plasma and excite the fluorine based gas; a temperature control system 121; a pressure control system 8, 109; and a controller 140 for controlling the gas distribution system, excitation system, pressure control system,

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and heating system. (Entire document, specifically, figure 1) Claims 3-16 are directed to the coatings found on the substrate being processed in the apparatus. It has been held that "Expressions relating the apparatus to contents thereof during an intended operation are of no significance in determining patentability of the apparatus claim." (Ex parte Thibault, 164 USPQ 666, 667 (Bd. App. 1969)) Furthermore, "Inclusion of material or article worked upon by a structure being claimed does not impart patentability to the claims." In re Young, 25 USPQ 69 (CCPA 1935) (as restated in In re Otto, 136 USPQ 458, 459 (CCPA 1963)) The apparatus of Carducci et al is capable of processing substrates having the claimed layers and features, with the desired process method.

4. Claims 1-20 rejected under 35 U.S.C. 102(b) as being anticipated by Grimbergen et al, US Patnet 6,835,275 B1.

Grimbergen et al teaches a plasma processing apparatus that includes: a gas distribution system 70 for supplying CF_4 and SF_6 to the processing chamber 40; an excitation system including an electrode 45 and RF coil 100, connected to a voltage source 104, 102 to form a plasma and excite the fluorine based gas; a temperature control system (column 14 lines 8-10); a pressure control system 90, 95; an ellipsometry or interferometry measurement system 25; and a controller 140 which receives input from the measurement system and controls the measurement system, gas distribution system, excitation system, pressure control system, and heating system. (Entire document, specifically, figure 1) Claims 3-16 are directed to the coatings found on the substrate being processed in the apparatus. It has been held that "Expressions relating the apparatus to contents thereof during an intended operation are of no

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significance in determining patentability of the apparatus claim." (Ex parte Thibault, 164 USPQ 666, 667 (Bd. App. 1969)) Furthermore, "Inclusion of material or article worked upon by a structure being claimed does not impart patentability to the claims." In re Young, 25 USPQ 69 (CCPA 1935) (as restated in In re Otto, 136 USPQ 458, 459 (CCPA 1963)) The apparatus of Grimbergen et al is capable of processing substrates having the claimed layers and features, with the desired process method.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 17-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Carducci et al, US Patnet Application Publication 2003/0037880 A1, in view of Grimbergen et al, US Patent 6,835,275 B1.

Carducci et al was discussed above.

Carducci et al differs from the present invention in that Carducci et al does not teach a measurement system.

Grimbergen et al was discussed above and teaches a measurement system.

The motivation for adding the measurement system of Grimbergen et al to the apparatus of Carducci et al is to provide a means for measuring the progress of the process to provide real time feed back to control the apparatus, and to indicate the end of the process as taught by Grimbergen et al.

Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to add the measurement system of Grimbergen et al to the apparatus of Carducci et al.

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The cited art teaches the technological background of the invention. The cited art contains patents that could be used to reject the claims under 35 USC § 102 or 103. These rejections have not been made because they do not provide any additional or different teachings, and if they were applied, would have resulted in an undue multiplication of references. (See MPEP 707.07(g))

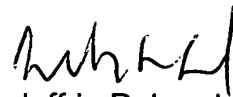
8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeffrie R. Lund whose telephone number is (571) 272-1437. The examiner can normally be reached on Monday-Thursday (6:30 am-6:00pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Parviz Hassanzadeh can be reached on (571) 272-1435. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should

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you have questions on access to the Private PAIR system, contact the Electronic
Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in black ink, appearing to read 'JRL', is positioned above the printed name.

Jeffrie R. Lund
Primary Examiner
Art Unit 1763

JRL
11/28/05